

BUCCINUM PYROSTOMA. *Bucc. testâ ovato-conicâ, lacted, ubique cancellatâ, anfractibus convexis, ultimo paululùm umbilicato; aperturâ ovatâ, fauce striatâ, vivide rubrâ.*

Reeve, Conch. Syst., vol. ii. pl. 268. f. 1.

Long. $\frac{3}{4}$; diam. $\frac{3}{8}$ poll.

Hab. —?

A small species belonging to the genus *Phos* of De Montford, remarkable from having a deep cornelian red mouth, whilst every other part of the shell is milk-white.

EBURNA JAPONICA. *Eburn. testâ ovato-conicâ, apice vix acuto, lævi; anfractibus convexis, maculis fulvis, grandibus, regularibus, biserialitè cinctis, interstitiis maculis parvis regularibus, diagonaliter dispositis, ornatis; umbilico parvo, profundo.*

Reeve, Conch. Syst., vol. ii. pl. 271. f. 1.

Long. $2\frac{1}{4}$; diam. $1\frac{1}{4}$ poll.

Hab. ad oras Japoniæ; Siebold.

This shell is distinguished by the great regularity of the spots; the upper and middle portions of the whorls are encircled with a band of large rhomboidal spots, whilst the spaces below and between them are filled with small triangular-like spots, arranged across in regular diagonal rows.

TEREBRA PRETIOSA. *Ter. testâ longissimo-subulatâ, luteolâ, fusco partim tessellatâ; anfractibus tricenis, supernè lævibus, uniserialitè serratis, infrâ arcuato-striatis, striis numerosis, profundis; canali subflexuoso.*

Reeve, Conch. Syst., vol. ii. pl. 274. f. 2.

Long. $5\frac{9}{16}$; diam. $\frac{1}{2}$ poll.

Hab. —?

This extraordinary shell, consisting of thirty whorls, exceeds five inches and a half in length, whilst it barely exceeds half an inch in breadth at the broadest part. It is I believe unique, in the collection of the Rev. Mr. Stainforth.

MISCELLANEOUS.

On the Phosphorescence of the Lampyris Italica.—(Extract from a letter of M. Matteucci to M. Dumas.)

Baths of Lucca, Aug. 1, 1843.

1. The phosphorescence of a glow-worm may cease before the death of the insect.

2. In the glow-worm there is a substance, which, without any sensible heat, diffuses a light that does not require the integrity of the animal and of its living state, in order to manifest itself with its peculiar properties.

3. Carbonic acid and hydrogen are media in which the phosphorescent matter of the glow-worm leaves off shining after thirty or forty minutes, if the gases are pure.

4. In oxygen the light of the phosphorescent matter is decidedly more vivid than in atmospheric air, and it remains bright nearly

three times as long: this is as much the case with regard to the separate luminous segments as for the entire worm.

5. When this phosphorescent matter shines in oxygen or in the air it consumes a portion of oxygen, the place of which is supplied by the corresponding volume of carbonic acid.

6. This same substance, in contact with oxygen, but having lost the power of diffusing light, does not sensibly absorb oxygen, and does not develop carbonic acid.

7. Oxygen, mixed with hydrogen or with carbonic acid in the proportion of 1 to 9, forms a medium in which the phosphorescence continues for several hours; we may then conclude that it is by the alteration which has taken place in the phosphorescent substance that this leaves off shining after several days, having at first been put into pure oxygen, the place of a portion of which was afterwards supplied by carbonic acid. I analysed the hydrogen in which I had kept several glow-worms for four-and-twenty hours; the insects had shone but a few minutes: this is the case if the gas is pure, if we operate over mercury, and if care be taken in filling the bell-glass to turn it over two or three times in order to remove the air which adheres to the glow-worms. In this hydrogen gas I found that the volume had increased by a small quantity, and in treating with potash I ascertained that this excess was owing to carbonic acid furnished by the glow-worms; and this took place either because there was a residue of oxygen in their trachea which had combined with the carbon and changed into carbonic acid, or because the insects contained this acid already formed; when only the luminous segments are put into hydrogen, with precaution, they continue to shine but for a few seconds, and the gas undergoes no change.

8. Heat, up to certain degrees, increases the light of the phosphorescent matter; the contrary takes place from cold.

9. When the heat is too great the phosphorescent substance is altered, and the same takes place with this substance when exposed to the air or to some gases for a certain time; it is necessary, however, that it should be separate from the animal.

10. This phosphorescent matter thus altered is no longer capable of giving light or of becoming luminous. These conclusions evidently establish the nature of the phenomenon; the production of the light in this insect is altogether dependent on the combination of the oxygen with the carbon, which is one of the elements of the phosphorescent matter. Now it is important to inquire how the phosphorescence takes place in the living animal; what circumstances cause it to vary; and what is the structure of the phosphorescent substance and of the parts which surround it.—*Comptes Rendus*, Aug. 14.

OBSERVATIONS ON DR. MARTIN BARRY'S MEMOIR ON FIBRE.

BY PROF. MOHL.

It has already happened to several microscopic observers, that they have fancied they saw in their investigations the most minute parts of organized bodies, and have imagined that they had detected primitive formations in the form of fibres, globules, &c., and then wherever they looked they again found them, and consequently gave

drawings of things which exist only in their phantasy. These persons are evidently in a situation similar to that of an acquaintance of mine, director of some iron-works, who had once occupied himself a long while in making damask steel, and during this time wherever he looked he fancied he could perceive curved lines similar to those which occur on that steel. But certainly no one has ever yet been so dreamy as the author of the memoir bearing the above title, which relates it is true to animal fibre, but also enters into the structure of plants; for in all organic substances he saw nothing but fibres, which sometimes had a spiral, sometimes a circular, sometimes a longitudinal position; but he moreover observed in these fibres a very complicated structure, viz. their being composed of adjacent spiral fibres with an opposite direction of the spiral, and with the convolutions fitting into each other, so that the figures which the author has given of these fibres are no bad representations of the knot of plaited hair on a woman's head. As the committee who decide upon the admission of the memoirs into the 'Philosophical Transactions' have to attend not only to the importance but also to the "*singularity of the subjects*," the publication of the memoir in question will appear perfectly justified.—*Botanische Zeitung*.

METEOROLOGICAL OBSERVATIONS FOR SEPT. 1843.

Chiswick.—Sept. 1. Foggy: sultry. 2, 3. Slight haze: sultry. 4. Clear and fine. 5. Heavy dew: clear. 6. Cloudless. 7. Slight haze: cloudless and hot. 8, 9. Very fine. 10. Foggy: heavy thunder-showers. 11. Very fine. 12. Overcast. 13. Clear and fine. 14. Overcast. 15—20. Exceedingly fine. 21. Foggy: very fine. 22, 23. Clear and fine. 24, 25. Overcast. 26. Fine: clear and cool. 27. Cloudy and cool: clear, with slight frost at night. 28. Very clear: overcast. 29. Cold and dry: overcast. 30. Rain.—Mean temperature of the month 3°·81 above the average.

Boston.—Sept. 1—6. Fine. 7. Fine: quarter-past 2 P.M. heat 77°. 8. Foggy. 9. Cloudy. 10. Fine: rain P.M. 11, 12. Cloudy. 13—15. Fine. 16. Cloudy. 17—19. Fine. 20. Cloudy: rain early A.M. 21, 22. Fine. 23, 24. Foggy. 25. Cloudy: rain A.M. 26. Windy. 27. Cloudy. 28. Windy. 29. Cloudy. 30. Cloudy: rain early A.M.

Sandwich Manse, Orkney.—Sept. 1. Clear. 2. Cloudy: showers. 3. Showers. 4. Showers: cloudy. 5. Damp: drizzle. 6. Damp: fine. 7—9. Clear: hot: fine. 10. Damp. 11. Haze: fog. 12. Fine. 13. Haze: clear. 14. Clear. 15. Clear: cloudy. 16. Clear. 17. Cloudy: fine: damp. 18. Showers. 19. Clear: aurora. 20. Rain. 21. Showers: cloudy. 22. Cloudy. 23. Damp: drizzle. 24. Drizzle. 25. Showers: drizzle. 26. Bright: cloudy: aurora. 27. Showers. 28. Showers: cloudy. 29. Rain. 30. Cloudy: rain.

Applegarth Manse, Dumfries-shire.—Sept. 1. Fair and fine: one slight shower. 2. Fair and fine. 3. Showery. 4, 5. Fine harvest-day. 6. Fine harvest-day: one slight shower. 7. Fine harvest-day: fair. 8, 9. Fine harvest-days. 10. Fine harvest-day, but cloudy. 11. Fine: shower early A.M. 12, 13. Fine harvest-days. 14. Fine harvest-day: thunder. 15. Fine harvest-day. 16. Fine harvest-day: sheet lightning. 17. Showery. 18. Fair and fine: thunder. 19. Fair and fine. 20—24. Fine harvest-day. 25. Fine harvest-days: hoar-frost. 26. Fine harvest-day: no frost. 27. Fine harvest-day: hoar-frost. 28. Dull: wet evening. 29. Cloudy: rain. 30. Cloudy.

Sun shone out 28 days. Rain fell 7 days. Thunder 2 days. Hoar-frost 2 days.

Calm 14 days. Moderate 9 days. Brisk 4 days. Strong breeze 3 days.

Mean temperature of the month 56°·3

Meteorological Observations made at the Apartments of the Royal Society, London, by the Assistant Secretary, Mr. Robertson; by Mr. Thompson at the Garden of the Horticultural Society at CHISWICK, near London; by Mr. Veall, at Boston; by the Rev. W. Dunbar, at Applegarth Manse, DUMFRIES-SHIRE; and by the Rev. C. Clouston, at Sandwick Manse, ORKNEY.

Days of Month.	Barometer.						Thermometer.						Wind.						Rain.				Dew-point.	
	Chiswick.		Dumfries-shire.		Orkney Sandwick.		London: R.S.		Chiswick.		Dumfries-shire.		Orkney Sandwick.		London: R.S. & a.m.		Chiswick.		Dumfries-shire.		Orkney Sandwick.			
	Max.	Min.	8 a.m.	9 a.m.	9 a.m.	9 p.m.	8 a.m.	Max.	Min.	Self-reg.	Max.	Min.	8 a.m.	Max.	Min.	9 a.m.	8 p.m.	R.S. & a.m.	Chiswick.	1 p.m.	Boston.	Dumfries-shire.		Orkney Sandwick.
1843.																								
1.	30-378	30-284	29-043	29-70	30-19	30-25	30-15	30-22	67-8	73-6	61-3	57	66	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.	30-428	30-333	30-117	29-75	30-24	30-24	30-15	30-08	69-7	78-3	64-0	54	56	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.	30-374	30-284	30-200	29-60	30-09	30-11	29-75	30-81	67-5	77-0	62-5	82	65	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.	30-356	30-330	30-256	29-64	30-21	30-30	30-05	29-82	62-5	78-7	60-3	75	70	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5.	30-472	30-388	30-312	29-73	30-22	30-25	30-20	30-16	58-7	68-4	55-2	74	55	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6.	30-368	30-292	30-251	29-73	30-32	30-20	30-11	30-20	61-3	68-0	54-3	81	50	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7.	30-354	30-270	30-246	29-69	30-21	30-20	30-23	30-23	62-7	73-8	60-0	83	53	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8.	30-354	30-267	30-193	29-70	30-19	30-15	30-25	30-25	66-3	75-6	60-0	78	62	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9.	30-244	30-183	30-086	29-65	30-13	30-07	30-22	30-04	65-3	73-3	63-6	79	61	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10.	30-002	30-022	29-956	29-46	30-09	30-07	30-00	29-93	63-0	74-0	60-2	74	56	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11.	30-026	30-075	29-942	29-38	30-04	30-10	30-00	30-10	63-3	73-0	61-0	74	58	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12.	30-272	30-200	30-163	29-60	30-35	30-24	30-21	30-21	61-5	69-0	59-5	75	61	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13.	29-912	29-847	29-826	29-40	29-90	29-88	30-00	30-00	61-5	69-7	54-7	69	62	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14.	29-888	29-956	29-796	29-33	29-89	29-87	29-98	29-92	68-7	73-3	61-7	76	54	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15.	30-076	30-053	29-994	29-43	29-00	29-08	29-88	29-86	67-7	76-7	61-0	83	53	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16.	30-216	30-128	30-082	29-44	29-05	29-03	29-06	29-03	68-3	73-7	59-7	84	52	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17.	30-192	30-148	30-090	29-44	29-03	30-10	29-70	29-94	66-7	78-0	63-0	80	58	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18.	30-256	30-163	30-148	29-54	30-19	30-12	29-70	29-94	67-2	74-4	62-7	80	49	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19.	30-190	30-107	30-084	29-54	30-00	29-06	29-87	29-79	64-7	74-8	58-3	81	47	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20.	30-468	30-216	30-131	29-54	30-04	29-06	30-01	30-19	60-8	73-4	57-4	75	50	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21.	30-590	30-363	30-283	29-83	30-37	30-43	30-27	30-43	60-2	71-6	57-0	71	48	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22.	30-542	30-467	30-347	29-92	30-37	30-36	30-31	30-31	59-0	66-4	56-2	66	45	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23.	30-316	30-259	30-161	29-76	30-23	30-22	30-27	30-23	55-3	64-2	52-3	65	41	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24.	30-186	30-064	29-947	29-63	30-13	29-00	30-11	29-92	52-3	65-2	46-6	60	38	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25.	29-906	29-781	29-681	29-27	29-74	29-73	29-81	29-82	49-2	57-0	44-6	55	32	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26.	29-700	29-584	29-735	29-75	29-78	29-83	29-82	29-88	47-5	54-0	41-8	59	34	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27.	30-004	29-908	29-957	29-50	29-85	29-75	29-80	29-80	48-3	56-2	41-4	62	47	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28.	29-614	29-983	29-788	29-16	29-79	29-75	29-61	29-51	55-8	57-0	49-3	68	55	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29.	30-212	30-162	30-071	29-58	30-098	30-084	30-049	30-042	61-6	70-3	56-6	73-90	49-90	60-5	66-5	46-7	55-86	53-65	Sum.	0-98	0-47	0-19	2-08	Mean.
30.	29-614	29-983	29-788	29-16	29-79	29-75	29-61	29-51	55-8	57-0	49-3	68	55	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	59